

MEMO

TO: 67-14442 Weiser School District 431

FROM: Sandy Hemenway

DATE: 9/15/2010

REF: Review for Licensing

Previously, surface water was used for irrigation on the property that is now described as the POU for water right 67-14442. It consisted of ditches and a gravity flow irrigation system. The Public School Policy required that the open ditch system be covered up and eliminated for safety reasons. For this reason, surface water would no longer be used for irrigation on this POU, and groundwater was made the primary source of water (**See 12/9/2003 Comment/Analysis comment from Lori Graves**). **There are no Overlaps for the POU/POD**, since Institute Canal Co. shares are only used on property further south of the POU, and Weiser City Municipal Service is used only for drinking/potable use.

The Theoretical Rate of flow = $(8.8) \times (5.5 \text{ Hp}) \times (0.7 \text{ eff}) / (43 \text{ ft}) + (2.31 \times 50 \text{ psi}) = 0.21 \text{ cfs (system capacity)}$. With a nozzle measurements collected during the 8/26/2010 field exam measuring 0.19 cfs (**See CFS Measurement comments for calculations**). **Recommend 0.18 cfs, at 0.02 cfs/acre for 9.0 acres. Volume recommended at 4.5 af/acre X 9.0 acres = 40.5 af (See Volume comment below, under Additional Information).**

On 9/14/2010, additional information was obtained via a phone conversation with Jim Reed, Superintendent of Weiser School District 431. Jim stated that the shapefile they submitted with the application for Permit included property all the way to the road. The trees along the roadside on the west border of the POU are not the school districts property, and are not irrigated by this irrigation system, but rather by a ditch running next to the road. The irrigated acres are the area within the fenced area for this POU, which can be seen with ArcMap. **Arc Map calculated the POU at 9.0 acres.**

Additional Information:

Contact Person

Jim Reed, Superintendent of Weiser School District 431, (208) 414-0616.

Permit

The Permit was approved for 0.19 cfs and 9.4 acres on 1/21/2004, with a condition to submit Proof of Beneficial Use by 1/1/2005 (proof was submitted 11/4/2004).

Proof of Beneficial Use

Proof was submitted 11/4/2004, with \$50 fee paid, receipt # C075673; Licensing Fee Schedule: 0 – 0.20 cfs, 0 – 2.0 af = \$50. The approved Permit was for 0.19 cfs, with no volume listed, so no additional fee is required.

Season of Use

The Permit was signed and approved with the Season of Use 4/1 thru 10/31. The Administrative Area shows IDWR standard Season of Use for this POU as 3/1 thru 11/15. No amendment is required for correcting the season of use to match the IDWR standard. This will be corrected with the Licensing.

Irrigation Companies

Institute Canal Co, Crane Creek Reservoir, and Weiser City Municipal Service is shown overlapping the POU. No irrigation companies/shares, or Weiser City Municipal Service is used for irrigation at the POU. The groundwater source is the only source used for irrigation of this POU. Weiser City Municipal Service is used solely for the domestic internal/potable water for the school.

Drilling Permit No

Under the POD tab in AdHoc, every time the letter D was added in front of the tag number, an error message would appear. For this reason, the D was not entered, only 0031236. The entire tag number is D0031236.

System Description

6 inch casing, 97 ft deep, static 33 ft, 5.5 Hp StaRite submersible pump, 3-inch discharge that reduces to buried 2-inch schedule 40 PVC, reducing to 1-inch PVC to the 18 zones. The zones run 7 thru 12 Model 2045A Maxi Paw nozzles (equivalent to Nelson 10 nozzles), that run at 50 psi.

Irrigated Acres

On 9/14/20010, additional information was obtained via a phone conversation with Jim Reed, Superintendent of Weiser School District 431. Jim stated that the shapefile they submitted with the application for Permit included property all the way to the road. The trees along the roadside on the west border of the POU are not the school districts property, and are not irrigated by this irrigation system, but rather by a ditch running next to the road. The irrigated acres are the area within the fenced area for this POU, which can be seen with ArcMap. Arc Map calculated the POU at 9.0 acres.

Comment/Analysis

Igraves 12/9/2003 Comment: Jim Reed, Superintendent for the school, stated that surface water was previously used for irrigation on the property via ditches and gravity irrigation. Public school policy required that the open ditch system be covered up and eliminated for safety reasons. Surface water will no longer be used for irrigation. Ground water will be the primary source of water.

Supplemental Water

NONE. Overlaps show 67-14703, 67-14704 and 67-14705 for Crane Creek Reservoir, and 67-4250 for Institute Canal. Jim Reed, Superintendent of Weiser School District 431 stated that they own shares from Institute Canal, but they are not for irrigation of this POU. The groundwater source for this water right is the only source of water utilized for irrigation on this POU.

POD Overlaps

NONE.

POU Overlaps

NONE. 67-14703, 67-14704, and 67-14705 Crane Creek Reservoir, and 67-4250 Institute Canal show as overlapping under the administrative area, but only groundwater is used for irrigation at the POU for 67-14442.

Conditions

Condition 121 was changed to 103 at licensing.

Legal Notice Remarks

Scurtis 12/8/2003 Comment: Applicant agrees to mitigate consumptive use in the future as needed.

System Capacity

Theoretical Rate of flow = $(8.8) \times (5.5 \text{ Hp}) \times (0.7 \text{ eff}) / (43 \text{ ft}) + (2.31 \times 50 \text{ psi}) = 0.21 \text{ cfs}$. A nozzle measurement was collected, measuring 0.19 cfs (**see CFS Measurement comment for actual calculations**).

CFS Measurement

A physical measurement was obtained on one of the zones with 12 nozzles running at the same time: Nelson Pro 600 series gear drive sprinklers 600, 6001, and 6002-ADV, and spreadsheet for low angle nozzles 13 degree trajectory, Nozzle No. 10 at 50 psi = 7.3 gpm/nozzle. $12 \text{ nozzles} \times 7.3 \text{ gpm/nozzle} = 87.6 \text{ gpm} \times 0.00223 = 0.19 \text{ cfs}$. Average 50 psi was confirmed from nozzles with gauge. **Recommend License at 0.18 cfs for 9.0 acres (0.02 cfs X 9.0 acres = 0.18 cfs).**

Volume

$V_{ir} = 9.0 \text{ acres} \times 4.5 \text{ af/acre} = 40.5 \text{ af}$.

$V_{dr} = 0.18 \text{ cfs} \times 260 \text{ days} \times 1.9835 = 92.8 \text{ af}$.

Recommend V = 40.5 af.

RECOMMENDATIONS:

From the information described above, the following recommendations for licensing are:

0.18 cfs, 40.5 af, 9.0 acres